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The modern treatment of cancerous diseases

ON CANCER.

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**THE MODERN TREATMENT OF
CANCEROUS DISEASES.**

THE MODERN TREATMENT
OF
CANCEROUS DISEASES

BY
CAUSTICS OR ENUCLEATION;

AN INQUIRY INTO THE EFFECTS OF MANY NEW REMEDIES
IN ARRESTING THE PROGRESS OF CANCER.

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LANGSTON PARKER, F.R.C.S.

CONSULTING SURGEON TO THE QUEEN'S HOSPITAL, AND TO THE LEAMINGTON HOSPITAL,
FOR DISEASES OF THE SKIN, &c., &c.



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THE MODERN TREATMENT OF CANCEROUS DISEASES BY CAUSTICS.



THE experience of a moderately long surgical career, during which time the treatment of an unusual number of cancerous diseases has fallen to my lot, painfully impressed me, as it must have done other surgeons similarly placed, with the inutility of operations with the knife, performed for the removal of the disease. During a period when my mind was more than usually occupied with these convictions I was honoured, by the request of the Council of the British Medical Association, to deliver the Annual Address on Surgery. I chose for the subject of that address an inquiry into the efficacy of the treatment of cancer by other means than those of the knife. The following pages contain the substance of that address; but they contain also much additional matter; with a detail of part of my surgical experience on the subject, and the

General
insuccess of
operations
with the
knife.-

Treatment
by enuclea-
tion.

narration of some cases I have treated, which certainly afford much encouragement to give these remedies further trials.

In the following pages I shall hardly go so far as to consider the whole surgical treatment of cancer, but only one branch of it, and that is, the treatment of cancerous diseases by caustics or enucleation, a subject to which little attention has been paid in Great Britain, at least systematically, although there are many isolated cases recorded, as I shall presently shew, which point to this mode of treatment (under certain circumstances) as valuable, effective, and safe. On the continent of Europe this practice is fast gaining ground, and many systematic works have been published within the last eight or ten years on the effects of different caustics in the cure of cancer, whilst some French hospital surgeons have devoted courses of clinical lectures to this branch of surgical inquiry.* The three modes at present known and practised for the cure (?) of cancer are three: ablation or excision, compression, and the destruction or enucleation of the disease by escharotic or caustic substances. I shall not enter into the consideration of the effects of the first mode of treatment, viz., that by excision. It may be sufficient for me here to observe that, without weighing the comparative methods of excision and

By excision ;
compression ;
caustics.

* "Leçons Cliniques sur les Affections Cancéreuses, professées à l'Hôpital Cochin." Par M. le Dr. Maisonneuve. Paris. 1852-1854.

cauterization, the latter practice may be adopted in cases where excision is utterly out of the question. A patient of mine, a lady of middle age, had suffered for many years from a recurrent cancrroid tumour in the back. I removed it several times by means of the knife, and with the chloride of zinc paste. The tumour did not return after its removal with the paste for nine years, but after its removal with the knife it came back in less than one. At the present moment the patient enjoys excellent health, and it is nearly two years since the last removal with the chloride. Hence, on this point alone, cauterization becomes a legitimate subject for inquiry. I shall not enter into the question of the little success which excision, as a curative measure, has met with, nor enumerate the nineteen reasons brought forward by Dr. Walsh against its performance. Much has been written on this subject during the last few years, and in balancing the duration of life between cancerous diseases which have been suffered to run their course, and those which have been removed by the knife, it has been shewn that there is a "small advantage only in favour of the operation." So that the patient has to suffer the pain and risk of it for very little gain. The latter remarks only refer more particularly to the removal of cancer of the breast, whereas what I have to say will bear upon the treatment of cancer in all organs. I shall only make a passing allusion to the statistics furnished by M. Canquoin, who gives eighty-two

Compression.

per cent of cures as the result of the practice of enucleation, and ten per cent as the result of excision.*

The second treatment to which I shall direct attention is by compression. This was first suggested by Mr. Young, a surgeon of Bedford, early in the present century. It is needless for me to enter into the details of the mode in which compression is practised, for although numerous cases of its successful application have been accorded, it can hardly be ranked amongst the "modern remedies" for the treatment of cancer. The mode originally suggested by Mr. Young has been modified in various ways; but the most modern and approved is that suggested by Dr. Arnott by the air-pad and spring. Compression had, in its day, many and powerful supporters, and the late Dr. Dennan addressed a pamphlet to Sir Benjamin, then Mr., Brodie, strongly advocating this plan of treatment.† Compression, first suggested by Mr. Young, found on the continent of Europe many advocates, and amongst the chief of these may be mentioned M. Recamier of the Hôtel-Dieu.‡ In the work of M. Recamier, published in 1829, many cases

* "Traitement du Cancer: Exposé complet de la Méthode du Docteur Canquoin, excluant toute Operation par l'Instrument tranchant"—page 131.

† "Observations on the Cure of Cancer, with some remarks upon Mr. Young's Treatment of that Disease," By Thomas Denman, M.D. London. 1806.

‡ "Recherches sur le Traitement du Cancer par la Compression méthodique, simple ou combinée, &c." By J. C. A. Recamier, Médecin de l'Hôtel-Dieu de Paris. Paris. 1829.

of the cure of cancer by compression are recorded. Thirty cases of absolute cure (?) of cancer are there given. It is true these cases have been analyzed by M. Lebert in his treatise on cancerous diseases, who throws much doubt on the real nature of the disease and the results of treatment. Bayle, in the fourth volume of the "*Bibliothèque de Thérapeutique*," published in 1837, gives the results of 127 recorded cases, out of which were seventy-one absolute cures. In commenting on these cases, Dr. Walsh observes, that "in some of the cases alleged to be cancerous, neither of the anatomical species of that affection existed; but it is, on the other hand, perfectly unquestionable that many of the absorbed growths were not only actually scirrhus, but had already become the seat of ulceration when submitted to compression."

Compression has found many advocates amongst very recent writers, especially Dr. Bennett, Dr. Walsh, and Dr. James Arnott. Its advocates, however, speak rather theoretically, than practically, of its merits, and there are few or no data to guide us in estimating the present real position of this method as a curative agent in the "treatment of cancer." If we take the modern theory, or rather the pathology of cancer as the basis of our explanations, Dr. Bennett tells us that pressure, "restraining the growth of and favouring the disintegration of the cancer cells, necessarily leads to their re-entrance into the blood, and their subsequent excretion through the

Evils of
compression.

Is cancer in
its origin
a local
disease.

Modern
opinions on
the subject.

emunctories.”* Should pressure have the effect here described, it is possible, nay, probable, that the cell, re-entering the blood, may be deposited as a nucleus of cancer in some other remote organ, either external or internal, and there have occurred cases where such consequences have appeared to follow the employment of pressure. It is too much, however, to say that such secondary deposit has been actually due to the employment of pressure, since such consequences have frequently taken place, whatever mode of treatment may have been employed. A question naturally arises here, upon the solution of which the whole argument on the curability of cancer unquestionably turns, and that is, the primary nature of a cancerous tumour;—whether a cancerous disease be a local manifestation of an already existing constitutional taint, or whether it be a local disease, the result of injury, or some other local and hitherto unexplained cause? As the disease has presented itself to me, its first aspect is that of diseased texture only, and not of one having any remote or general cause. (The opinion of Mr. C. H. Moore, F.R.C.S., Surgeon to the Middlesex Hospital, where there is a separate cancer ward)—*Association Journal*, April 21, 1866, p. 406. The most prevailing modern opinion is, that a cancer is the local manifestation of an already existing constitutional

* “On Cancerous and Cancroid Growths.” By John Hughes Bennett, M.D. Edinburgh. 1849.

taint. I lately watched a case in the wards of the Queen's Hospital, where a scirrhus tumour existed in both mammae, and such tubercles were also present in the glandular system generally, in the skin of the abdomen, in the uterus, and even in the pericardium. This patient had on different parts of the body, externally and internally, between fifty and sixty tumours, possessing both the clinical and microscopical characters of scirrhus or hard cancer. Whilst I write, there is again another female in the wards of the same institution, who now has no less than seven of these tumours, one on the mamma of the right side, one in the opposite axilla, four on the back, and one on the skin of the thorax. There can be no question as to the nature of such complaints, that they are local evidences of a general constitutional taint; neither can there be a question as to the utter futility, not to say criminality, of interfering surgically by operation with cases of this nature.

On the other hand, where a disease arises spontaneously in a part—the mamma, tongue, lips, or elsewhere—and where the origin of such mischief may be traced, as it frequently may, to local irritation or injury, where otherwise the patient's health continues good, no evidence of general cachexy, and no complication, glandular or otherwise, can be detected, are we not warranted in supposing such mischief may be on the onset local—and if we suffer such disease to continue, the patient

Constitutional origin of cancer.

Occasionally due to local irritation.

Local
symptoms
sometimes
the most im-
portant.

frequently sinks from the discharges and hæmorrhages, which are due to local causes alone, and which are consequent upon the ulceration and spreading of the tumour? Numbers of patients perish from the local irritation produced by cancerous sores, without any other complication, glandular or otherwise; and if the constitution becomes subsequently tainted, or a general cachexy induced, is it not reasonable to suppose that it may be due to the spreading of the local disease to the system generally? It is on this very principle that the early extirpation of tumours, reputed cancerous, has been recommended by the great majority of practical surgeons in all countries—"the disease is to be removed before the system generally becomes tainted by its presence." In many instances I am certain that the disease is local, and that it spreads by the dissemination of the cancer cells around it, into the neighbouring tissues; hence it becomes so difficult to eradicate the disease by a cutting operation. Some French authors, quoted by M. Velpeau, at page 610, have contended for late operations in cancer, but the recommendation is so at variance with all good surgery, and with all sound pathology, that it would be an insult to common sense to consider the arguments by which such a practice is defended. Mr. Paget, in speaking of certain epithelial cancers, uses these remarkable words, "They usually lead to the formation of structures like themselves in the lymphatic glands connected with their primary

seat, and they lead sometimes to similar formations in more distant organs.”* This passage, if I understand it rightly, clearly recognizes the principle of the occasional contamination of the system generally, from a cause at first purely local. Again, M. Lebert (Introduction, page xxii), tells us, “that while the symptoms of cancer are strictly local, it is legitimate and sound practice to remove the disease by an operation, since,” says he, “by so doing, we take away the chief or principal auxiliary for the general propagation of the cancerous agent or element; and this principle,” continues he, “is as equally applicable to relapses as to primary diseases.” I have quoted his words literally, and they clearly imply or admit what I have just contended for, that some, if not many forms of cancer are, in the commencement, local diseases. There are many instances in which the degrees of cancer can be clearly traced to a local cause, such as blows, injuries, the irritation of a wart, the stumps of decayed teeth, the effect of child-birth on the uterus, smoking on the tongue, &c., &c.

It is manifestly to such a class of cases only that operative measures of any kind are applicable, and it must be to such apparently local diseases that they must be limited. I am of opinion that cancer manifests itself in two ways: first, as a local mischief, the constitution becoming subsequently contaminated: and, secondly, the

Local origin
of cancer.

To what class
of cases
operations
must be
restricted.

* “Lectures on Surgical Pathology,” vol. ii, p. 480. By James Paget, F.R.S.

Descriptions
of various
caustics.

local mischief being the first evidence of a constitutional taint, and in the latter class of affections, complications affecting the system at large are not long in shewing themselves, and thus proving the position. Having indicated the nature of these local cancerous growths in which operative measures alone are to be employed, and having glanced at two out of the three of those procedures which are recognized by modern surgeons in the treatment of cancer, I proceed to the more immediate object of this essay—the indications for the employ of caustics in the treatment of the local forms of cancer. In this country I know of no systematic treatise or essay on the employment of caustics in cancer, in which the nature of the cases is pointed out which would be proper for their employ, which describes the forms of remedy to be used, and to what cases particular forms of remedy are or are not suited. Now and then an isolated case of the apparently successful employment of the chloride of zinc, or other caustics, is to be found in the pages of a medical periodical; but I believe I am correct in saying that nothing definite on this point, as far as a set treatise is concerned, exists in English medical literature. Even on the continent, although there are many treatises on the use of several caustics, an impartial history of them has yet to be composed.

The chief caustics which have been used in the treatment of cancer are arsenical pastes, chloride of zinc

pastes, the concentrated mineral acids, the nitric and the sulphuric, the potassa cum calce, in a solid form, known as the caustic Filhos (a very valuable remedy), and the chloride of bromine, used either alone or in combination with the chlorides of zinc, antimony, or gold. There are many other preparations to which I could allude, but I think all that can be done by caustics may be accomplished by one or more of the preparations I have already mentioned. In fact, the caustics upon which any real dependance is to be placed, in the treatment of cancer, may be reduced to two : the chloride of zinc, either employed singly on Canquoin's plan, or in a state of combination on Dr. Fell's, and arsenic. From the use of these remedies as therapeutic agents in the treatment of cancer, many sound and good cures have been made, where the use of a cutting instrument has either failed or could not be employed.

Before describing the mode of employing the caustics alluded to, I shall briefly describe a compound procedure where caustics have been used, after a cutting operation to destroy the cancer cells, that may possibly have been disseminated through the wound, or the neighbouring tissues. The remedies that have been used for this purpose are the actual cautery, the chloride of zinc paste and weak solution of zinc, in the proportions of 20, 30, or 40 grains of the salt to each ounce of water. Mr. Moore and Mr. De Morgan, of the Middlesex Hospital,

have successfully employed this method in several cases of cancer. Mr. De Morgan says, "I am myself so satisfied with the results at present obtained, that I trust the plan will be yet more extensively tried.—*British and Foreign Medico Chirurgical Review*, January, 1866, p. 201; and *Lancet*, May 5, 1866, p. 483.

Some years ago I removed with the knife a large cancerous breast from an elderly female; it was an open ulcerated cancer, secreting profusely a fœtid pus, and wearing the patient out with pain and discharge. I had no hope of doing more than relieving her for a time. After the operation I passed the actual cautery over the whole cut surface. I left the wound to heal by granulation, for there was no integument to cover it. The wound healed well, and the patient made a good recovery. She has had no return of the disease, although it is more than twelve years since the operation, and the patient is more than seventy years of age.

Chloride
of zinc.
Canquoin's
paste.

Canquoin's treatise on the chloride of zinc appeared in 1838; one on the solidified nitric acid, by M. Rivallié, in 1850;* another on the use of the solid potassa cum calce in cancer of the neck of the uterus, &c., in 1847,† by M. Filhos, who first suggested this remedy; the clinical lectures of Maisonneuve, at the Hospital Cochin, in 1852,

* "Traitement du Cancer par l'Acide Nitrique Solidifié." Par A Rivallié. Paris. 1850.

† "De la Cautérisation du Col de l'Uterus avec le Caustique Solidifié de Potasse et de Chaux." Par M. le Dr. Filhos. Paris. 1847.

on the uses and employ of caustics in cancerous diseases, of which lectures M. Velpeau speaks very highly. M. V. himself, in his treatise on diseases of the breast, enumerates eleven or twelve different caustic preparations. The *Dublin Quarterly Journal*, for November, 1855, contains a translation of M. Lasegue's critical review of Llandolfi's *Treatment of Cancer by Caustics*, the chief of which is the chloride of bromine. The chloride of zinc is perhaps the caustic best known in this country, and the one now most commonly, though too rarely, employed in the treatment of cancerous or cancroid diseases. This salt, as a caustic in the treatment of cancer, was first introduced by M. Canquoin, of Paris, in 1834, who, in that year and the succeeding, addressed two communications to the Academy of Medicine, stating the success which he had obtained in removing cancerous growths without the aid of the knife. The preparation, at first known as Canquoin's plaster, was soon ascertained to consist of about equal parts of chloride of zinc and flour made into a paste of proper consistence with water. In 1838, M. Canquoin published a complete account of his remedy, by which six hundred cases of cancerous disease had been treated with a confessedly great amount of success. M. Canquoin, in his work, gives four formulæ for the preparation of the chloride of zinc paste:—1. Equal parts by weight of zinc and flour. 2. Zinc one part, flour two parts. 3. Zinc one part, flour three parts. 4. Zinc one

Formulæ for the employment of the chloride of zinc.

part, muriate of antimony one part, flour one part and a half. Water from twenty to thirty drops to the ounce for each of these preparations. The first preparation applied four lines in thickness for forty-eight hours, destroys the parts to the depth of an inch and a-half. The same preparation three lines thick, applied for the same period, acts to the depth of about an inch only. The depth to which the chloride of zinc acts can, with a little practice, be regulated to the utmost nicety. This depends on two causes; the strength of the remedy, and the time it is allowed to remain on. A paste of medium strength applied to a thickness of two lines, and suffered to remain on for eight or ten hours, will produce an eschar a quarter of an inch in depth. Plaster of Paris may be substituted for flour in mixing the paste; this renders the paste less deliquescent. In the 4th preparation, the chloride, or butter, of antimony is added. This is done, not with the object of adding to the energy of the caustic, but to give it a degree of consistence, like that of soft wax, which enables the operator to apply the remedy more uniformly over an unequal surface; a condition often met with in open cancers, in which caustics find their most useful application.

In what cases the various formulæ are indicated.

The pastes, Nos. 2 and 3, may be applied in carcinomatous ulcerations, which are not deep, but spread over a greater or less extent of surface. No. 3, on account of the greater dilution of the chloride of zinc, acts slowly

and with a less amount of pain. No. 4 is combined with the chloride of antimony: this preparation, when well made, has the consistence of soft wax, and is particularly suited to growths which are uneven on the surface, to the inequalities of which it is easily moulded, and does not alter its form or run when applied. M. Velpeau* speaks very highly of the chloride of zinc as an application to cancerous ulcers and growths. It is a preparation easily manipulated; it possesses no action on the epidermis, or on mucous membranes covered with epithelium; it may be moulded with the hand to any shape, form, or thickness; it does not fuse or run, its action being strictly limited to the surface to which it is applied. Its action, again, is expended on the parts which it touches; unlike the arsenical pastes, there is nothing to fear from absorption, its action being strictly limited to the local effects to which it gives rise.

M. Maisonneuve, in his clinical lectures on cancerous diseases, gives very favourable testimony to the effects of the chloride of zinc, especially in reference to its application to large, foetid, bleeding, cancerous, or cancroïd ulcers, where the knife is utterly out of the question, and where the patient is sinking from local irritation and hæmorrhage. M. M. mentions a case in which an enormous cancer of this kind was entirely removed by the remedies

Favourable
testimony
to the effects
of the
chloride of
zinc.

* "Traité des Maladies du Sein, et de la Région Mammaire, &c." Par A. Velpeau. Paris. 1854.

I have mentioned. This case is quoted at page 63 of the first number of Maisonneuve's clinical lectures. It is that of a female, in which a large cancer of the mammary region had been destroyed by the chloride of zinc paste, and had remained cicatrized for two years after the healing of the sore produced by its application.

Dr. Gillespie (in the *Edinburgh Monthly Journal* for January, 1856,) refers to a case of cancer cured by the chloride of zinc paste and remarks that, in similar cases, the paste should be tried before recourse is had to the knife. Mr. Miller, in the debate on this case, bore testimony to the efficacy of the chloride of zinc.

Successful
use by the
author.

I have used the chloride of zinc paste in several cases, which I shall hereafter detail, with a gratifying amount of success. The two chief objections which may be raised against its use are the necessity of first destroying the epidermis before the remedy is applied; and, secondly, the pain occasioned by the prolonged contact of the caustic with the disease, which varies from a period of twelve to forty-eight hours, according to circumstances. Modern science has, however, enabled us, to a certain degree, to mitigate pain, and, in some instances, to entirely remove it: and, therefore, this objection to the use of caustics in cancer falls to the ground. Pain may be assuaged either by the inhalation of æther or chloroform, or other mixed vapours, or by the external application of æther, or ice and salt, or

Pain, how to
mitigate it.

other local remedies which are free from risk, and certain in their effects.

The pain may be vastly diminished, if not entirely allayed, by the application of ice and salt, on the plan recommended by Dr. J. Arnott. I removed, by means of the chloride of zinc paste, a growth of the size of a walnut from a lady, who had been twice operated on before with the knife for the removal of a similar growth in the same situation, without the remedy causing anything like severe pain. The moment the burning of the caustic was felt, a large bladder of ice and salt was applied, which entirely removed it in a few seconds: this was continued for a short time, and then removed: when the pain of the caustic began again, a fresh bladder, similarly filled, was applied, with a like effect; so that, although the caustic remained in contact with the skin for six hours, the pain experienced was of a most trivial character. I have tried this plan with other cases, with almost an uniform amount of success; and some modification of this kind, properly carried out, will effectually remove the chief evil attendant on the application of caustic remedies to the destruction of cancerous growths, which is the amount of prolonged pain they occasion. The chloride of zinc may be applied with a degree of precision unattainable by any other caustic; it destroys the tissues in direct relation with the thickness of the layer of paste applied, and this, with a little prac-

By the use
of ice and
salt.

Great
precision
attainable
by the use
of chloride
of zinc.

tice, may be calculated to a great nicety; it never runs, or fuses; it destroys only those parts which it covers and these it divides from the surrounding structures as cleanly as though they had been cut with a knife. The crust or scab formed by this caustic is hard, dense, and white; there is no sanguineous or other discharge produced by it. The eschar separates at the end of twelve or fourteen days, leaving a clean, healthy, granulating surface underneath.

Dr. Fell's
treatment.

Since the first edition of this book was published, an American physician, Dr. Fell, came to London and vaunted a secret remedy in the cure of cancer, and many cases were treated, and apparently, if not really, cured on his plan. So plausible was it, that the surgeons of the Middlesex Hospital placed a number of patients at his disposal, which were to be treated in the hospital, on condition that he revealed the composition of the remedy, and made it known for the benefit of suffering humanity. This was done, and the essence of the remedy was the "chloride of zinc." Although Dr. Fell attributed much of the benefit derived from his plan, to the use of another preparation used externally and given internally (the Sanguinaria Canadensis), there can be no doubt that the real curative agent was the chloride of zinc. The topical remedy employed by Dr. Fell was composed of—

Decoction of sanguinaria, chloride of zinc, of each two ounces;

Flour, a sufficient quantity to make a glutinous paste, a little more consistent than treacle.

The concentrated mineral acids have lately been much employed as caustics in the treatment of cancerous diseases. I allude especially to the nitric and sulphuric acids. A set treatise on the use of one of these acids, the nitric, has been published by M. Rivallié, in which monohydrated nitric acid is made into a paste with scraped lint or charpie. This M. Rivallié describes as solidified nitric acid. Many successful cases are given by this surgeon of the total and rapid destruction of cancerous growths by his method. M. Velpeau and M. Maisonneuve speak favourably of the preparation; the latter prefers it mixed with asbestos. It is neither so easily under command, nor so destructive as the concentrated sulphuric acid.

Concentrated sulphuric acid, made into a paste with saffron, has been described by Velpeau and others under the title of "black caustic," "caustique noir."

In speaking of this remedy, M. Velpeau says:—"No caustic has afforded me similar advantages; its action is prompt, energetic, and deep; it is easily manipulated, gives rise to no sanguineous oozing, like the alkaline caustics, nor to inflammatory re-action or swelling. One is sometimes surprised," says this surgeon, "to see a vast fungoid surface secreting daily an immense quantity of blood and sanies, converted in a few hours into a black

Use of the
mineral
acids.

M. Velpeau's
black caustic
concentrated
sulphuric
acid.

crust, from which issues no moisture whatever." "It is," says M. Maisonneuve, "our caustic 'deprédilection,' of which I most frequently make use in the destruction of hard and large cancers."

"The day, or day but one, after its application, the surrounding integuments are neither red nor swelled, and hardly more sensible than the healthy skin. One would say, in fact, that the patient was already cured, and that the black crust reposed upon a cicatrix already formed." —Velpeau, p. 666.

The application of this caustic in my hands has not succeeded to the extent M. Velpeau would lead us to suppose. It gives great pain, and is not nearly so certain in its effects as the chloride of zinc. I employed it in one case, which appeared very promising, but the disease was not eradicated, and I was compelled afterwards to use the chloride of zinc, which succeeded.

Alkaline
caustics.

The alkaline caustics, or those which have potass for their base, are powerful, effective, and manageable remedies in the treatment of many forms of cancer. The remedies chiefly applicable are the Vienna paste, or Heister's caustic, in the form of powder, composed of five parts of the hydrate of potass and six of quick-lime, rubbed together as a dry powder, and when applied mixed into a paste with a little spirit of wine; or the same remedy, now much in vogue on the continent, consisting of the same ingredients, though in different pro-

portions, fused and run into leaden tubes, like nitrate of silver or potassa fusa. In this form the remedy is known as the caustic of "Filhos."

It is composed of two parts of potass and one of lime, and is a most convenient, active, and useful remedy. Its inventor chiefly employed it in destroying fungoid growths from the "uterus," what he terms "fungoid ulcerations," and which, according to the cases detailed by Dr. Filhos, appear to be varieties of epithelial cancers, some of them probably of the nature of what are termed, "cauliflower excrescence." Mr. Weedon Cooke (*Cancer, its Allies and Counterfeits*) speaks very highly of the destructive power of the "manganese cum potassa" in cases of cancer, where caustics are indicated. The remedy may be obtained from Mr. Bastick, of Brook Street.

In a Clinical Lecture, reported in the *Association Journal* for March 29, 1856, Dr. West reports a case of similar disease cured by the galvano-caustic, applied by Mr. Paget.

This physician also remarks, in the same lecture, that the chief cancerous or cancroïd growths from the uterus are of the epithelial kind, and it is to precisely this class of cases that the caustic of Dr. Filhos is suited. By the application of this remedy, which I have frequently used, the diseased mass may be gradually rubbed away into a kind of putrilage, or soap, with a very trivial amount of pain.

The caustic
"Filhos."

Galvano-
caustic.

Epithelial
cancer of the
uterus

The amount of pain produced bears no relation to the activity and destructive agency of the caustic in such cases. All the alkaline caustics have the effect of producing a sanguineous oozing from the parts to which they are applied. They are unlike the chloride of zinc and the mineral acids in this respect, which have the effect of coagulating the blood in the smaller vessels in the immediate vicinity of cancerous growths, whilst the alkaline caustics give rise to a sanguineous discharge to a greater or less extent.

M. Llandolfi's
treatment.

About ten years ago, a foreign physician, M. Llandolfi, introduced a treatment of cancer by caustics, which for a time appeared very promising in its results, and many cases were published of its apparent success.

An account of this method appeared in the *Archives Générales* for May, 1855, by M. Lasègue—a translation of which paper may be found in the *Dublin Quarterly* for November, 1855.

“Dr. Landolfi,” says M. Lasègue, “does not belong to the habitual blazoners of secret remedies; his method is not enveloped in any mystery. He is surgeon-in-chief of the Sicilian army, and clinical professor of cancerous diseases in the hospital of the Trinity, at Naples; and he has made it a point of duty to court a publicity in reference to his peculiar treatment, which is honourable to himself, and must be beneficial to humanity. In this spirit he has gone through the great scientific centres of

Germany and France.”* The essential novelty in M. Llandolfi’s remedy is the chloride of bromine, which remedy, when employed alone, is made to consist of $2\frac{1}{2}$ to 4 drachms of the chloride of bromine, made into a paste with powdered liquorice. This paste is employed pretty much in the same way as that of the chloride of zinc and other caustics, the manipulation of which I have just passed in review. The time for remaining on, and the thickness of the paste employed, must depend mainly on the depth and extent of the tumour. As a means of relieving pain during the period of the application of the caustics. Dr. Llandolfi recommends the exhibition of opiates; chloroform may also be employed for this purpose; but as I have already shewn, the most efficacious and safe plan is the application of benumbing cold, produced either by æther spray, or ice and salt, which should always be employed where the situation of the disease permits it. In Italy, M. Llandolfi employed a remedy composed of equal parts of the chlorides of bromine, zinc, gold, and antimony, mixed with a sufficient quantity of flour to make a viscid paste. In Germany and Vienna, these proportions were a little varied, and the paste was made to consist of chloride of bromine, 3 parts; chloride of zinc, 2 parts; chlorides of antimony and gold, of each 1 part, made into a

Chloride of
bromine.

* “Dublin Quarterly Journal of Medical Science.” November, 1855, p. 482.

M. Llandolfi's use of the chloride of zinc and chloride of gold.

paste of proper consistence with liquorice powder and water.

According to M. Llandolfi's views, the chloride of zinc is indispensable in ulcerated cancers, in which it acts as a hæmostatic. The chloride of gold is only rarely useful: it is particularly indicated in cases of encephaloid cancer, on which it is said to exercise a special, if not specific, action.

The integument and parts surrounding the disease are, where it is practicable, to be protected from the action of the caustic, by being covered with strips of cloth spread with a pomade composed of four parts of chloroform and thirty of lard, or, what is said to be better, cold cream.

Curative effects of M. Llandolfi's treatment.

A number of cases have been detailed as cured by M. Llandolfi; but it is exceedingly probable that some of these diseases were not, according to modern opinions, cases of veritable cancer, nevertheless it is equally certain that many of them were so.

The French Academy appointed a commission to report on M. Llandolfi's method. Caustics are not applicable to all forms of cancerous or cancroid diseases; but there are many cases now abandoned by surgery, in which such remedies, judiciously employed, may save the patient, and prolong life for indefinite periods. In open cancers, where the patient is being worn out by constant discharges of blood, and

pus and where all operations with the knife are out of the question, caustics find a most beneficial application. "Is it nothing," says M. Maisonneuve, "to prolong life for two or three years? Is it nothing to ease pain, and give the patient ease and apparent health?" It is so, and this may be accomplished by the judicious application of caustics in open cancer. M. Maisonneuve goes on to quote the case of a female who had an open cancer covering the whole of the front part of the chest—who, a prey to despair, and exhausted by pain, bleeding, and discharge—was restored to a great degree of comfort, and a comparative degree of health, in a short time, by caustic treatment. Under it the wound entirely healed, and the patient lived for two or three years in comparative comfort.

I was sent for to see a lady, a short time since, who shewed me on the side an open cancer as large as a cheese plate, with a rough, knotty surface, daily furnishing a a fetid discharge, and sometimes bleeding profusely. She was rendered most comfortable by a very mild caustic treatment, and now goes into society, and is apparently in pretty good health. Caustics are not, however, applicable in all cases.

Very lately a new application of bromine to cancerous growths has been suggested by Dr. Routh—(*A New Mode of Treating Epithelial Cancer of the Cervix Uteri, and its Cavity*. Obstetrical Society of London, October 3, 1866.) Five grains to a dram of spirits of wine was

Bromine in cancer of the cervix uteri.

applied by means of a piece of lint to an epithelial growth from the os uteri after the application of the actual cautery, used to stop the bleeding. After forty-eight hours it was removed, and the part dressed with a poultice of lint dipped in warm water, and in the day warm douches were applied. In about a week the slough came away, and left a healthy granulating surface. The parts were then dressed with a preparation of bromine and glycerine, and the patient took, as a medicine, the iodide of arsenic, with conium. Two or three further applications were made, and the patient left the hospital with a moveable healthy uterus. A second case, similarly healed, is detailed by Dr. Routh, in which the like treatment was adopted after the cancerous growth had been removed by the *ecraseur*. This patient left the hospital with "*healthy mucous membrane, and looking fat and hearty.*"

Beneficial
effects of
bromine.

Many of the speakers in the debate on Dr. Routh's paper, especially Dr. Wynn Williams and Dr. Rogers, bore favourable testimony to the use of bromine as a remedy, which certainly had the power of arresting the progress of cancer. It is "a most energetic and valuable caustic, destroying vascular growth, arresting hæmorrhage, and the prostration resulting from it, and checking all foul and fetid discharges." "Healthy granulations follow its application, and the parts appear free from disease." Dr. Routh thinks much mischief is done by considering cancer an incurable disease. I have

expressed the opinion that we are on the eve of a discovery for the arrest, or, perhaps, the cure, of cancer. We are now, actually, in possession of many remedies that will arrest the ravages of this disease for months, nay, for years; and if we can only render life comfortable and restore a comparative degree of health to the patient, the caustic treatment of cancer will have done much good, and it must be remembered it finds its application where the knife is utterly out of the question.

In most cases, where a cancerous tumour is circumscribed, moveable, and uncomplicated, where the integuments covering such tumours are healthy, or only very slightly diseased, where the malady springs from the bone or periosteum, or where these are more or less implicated, in diseases which are of a cystic character, or those again which are placed in the vicinity of, or immediately connected with, large blood-vessels, the knife is preferable. These remarks apply also with greater force if the disease is primary.

In open or ulcerated cancers, or cancrioid growths generally, especially if situated on the skin, the lips, the tongue, or the uterus, where the patient appears sinking from the local symptoms of the disease, such as frequent hæmorrhages, profuse and fetid discharges, where also a great extent of surface is destroyed, caustics are generally preferable; and numerous cases of success might be quoted from my own practice, and from the authorities I

Cases best
suited for
treatment
by caustics.

have referred to, where caustics have brought about the cicatrization of cancerous ulcers, when all interference with the knife was utterly out of the question. I allude more especially to some of the details made by M. Maisonneuve at pages 57 and 58 of his *Clinical Lectures on Cancerous Affections*. Again, there are situations where the knife cannot be used, where caustics find their application; in cancrroid of the lips, the tongue, the face, and the uterus. I say, where the knife cannot be used—for although it is common to use the knife in such cases and such situations, the mutilations (in the lower lip and tongue especially) are so frightful, the risk of return of disease in the cicatrix so great, and the probability of cure so remote and uncertain, more especially in the tongue, that the remedy becomes infinitely worse than the disease.

In a clinical lecture, published lately in the *Association Journal*, I had occasion to remark that caustics were inapplicable in the treatment of cancrroid or cancer of the tongue.

I have since learned that many caustics may be applied, with ordinary caution, to diseases being far back in the mouth, for I have treated several cases of cancer of the tongue with escharotics, without accident or evil consequences.

Caustics are again eminently useful in secondary cancerous formations. How frequently does it happen

Caustics
especially
useful in
secondary
cancerous
diseases.

that when relapses or returns of disease take place after operations with the knife, that such relapses take place in the immediate vicinity of the part first removed, nay, most commonly in the cicatrix or track of the wound itself. Such secondary formations are generally closely watched, the patient is keenly alive to the probability and danger of such returns, and the first re-appearance of disease is at once detected; very unlike the primary affection which, in many instances steals on insidiously for a considerable period of time before the patient discovers its existence. It is to these secondary formations that caustic treatments are especially applicable.

In the first place, the patient is averse, in a great majority of instances, to further interference with the knife, and would frequently rather resign life than submit to more mutilation. In such conditions caustics are valuable agents; the secondary formation, at first small and circumscribed, can generally be completely destroyed by the application of one of the remedies I have mentioned; and very frequently after this second application, no other relapse may occur during long periods of time. I can call to mind two cases in which such results have taken place, and I can remember others which have terminated fatally, where, I believe, if I had been as fully aware of the advantages of caustic applications as I now am, life might have been saved, or, at least, indefinitely prolonged.

Caustics
frequently
successful in
secondary or
relapsed
cancer.

Chemical
action of
caustics on
the tissues
surrounding
cancerous
growths.

Further, all operative measures for the removal of cancers contemplate not only the destruction of the local disease, but, as far as may be, the protection of the patient against its return. In reference to this point, M. Velpeau remarks—"I have frequently employed caustics in the treatment of cancer, and I have frequently thought, I must confess, that they have more certainly prevented secondary cancerous affections in the neighbouring lymphatic glands than extirpation with the knife"—p. 659. "I have twice seen," continues M. Velpeau, "voluminous and indurated glands in the axilla diminish in a remarkable degree, during the period I was destroying a cancer of the breast by caustics, and I have observed the same effect in the sub-maxillary glands, whilst cancers, or canceroid diseases of the lower lip, were treated in a similar manner." The action of caustics is chemical and destructive, and doubtless their action extends to some distance into the surrounding tissues beyond the exact line where their destructive agency is defined on the skin. This is extremely important. The celebrated Dutch histologist, Van der Kolk, remarks, "that through an interchange of materials between the cancer cells, and the fluid pervading the cellular tissue surrounding a cancerous tumour, the intercellular fluid, previously healthy, acquires the property of forming new cancer nuclei and cancer cells. On account of the minuteness of these nuclei and cells, their presence cannot be detected with the naked eye, so

that the surrounding parts may appear to be perfectly healthy, notwithstanding that they contain the germs of the advancing formation of cancer. It is, therefore," continues this writer, "of importance, in removing cancer by operation, not only to take away at the same time a large quantity of the adjacent sound part, but also to examine the innermost sectional edges with a powerful lens, in order to ascertain whether any trace of cancer in process of formation can be discovered in them"—*British and Foreign Medico-Chirurgical Review*. April, 1855.* This theory, doubtless, explains the reason of the frequent returns of cancerous tumours in the same situation "surplace," but, again, the practical rules it suggests in reference to the operation of excision are all but impossible, in many instances, to be carried out. These opinions, again, seem to give force to the supposed curative effects of prolonged suppurations after operations for the removal of cancer, and these suppurations are much greater, and longer continued, after caustic than cutting operations. M. Delafond, on the same principle, in the celebrated discussion on cancer at the French Imperial Academy of Medicine, recommended that, after operations for cancer, the wound should be suffered to suppurate for a certain period of time, in order that any fresh formation

Theory of
relapsed
cancer.

* "De l'Extension des Cellules du Cancer aux Environs des Tumeurs Cancéreuses, &c., Archives Générales de Médecine. January, 1856." A Translation of the original paper from "Henle's Journal."

Union by
the first in-
tention after
operations
for cancer
not
advisable.

of nuclei or cancer cells might be eliminated by this channel. Escharotics, again, chemically destroy the cancer cell; operations with the knife have no such effect, and if only one cell is left it may become the nucleus of a fresh growth. I think it may be argued, from what has been just said, that even after the excision of cancerous tumours, the attempt to heal wounds quickly by the first intention is not a satisfactory practice, and that healing by granulation, during which process prolonged suppuration must take place, is much more likely to guard the patient against a return of the disease. M. Lebert, a great authority on cancer, speaks of what he terms a compound operation in the removal of cancerous and cancroïd diseases, and this practice is evidently again a recognition of the principle I have just indicated, which shows that it is difficult and even impossible to remove the disease by excision; and therefore he says, speaking of cancer of the skin, in which he not only sanctions, but recommends the employment of caustics—"The combination of excision and cauterisation frequently brings about results, which we obtain with difficulty by either method employed separately." What this means is clearly that, after the bulk of the disease has been removed by excision, the surface thus exposed is to be treated by escharotics, with a view of destroying the cancerous nuclei, or cells, which may be infiltrated through, or in process of formation in, the neighbouring or immediately surrounding tissues.

This theory of the extension of the germs of cancer, or cancer cells, into the tissues surrounding a primary cancer, has lately been developed by Mr. Moore and M. De Morgan, of the Middlesex Hospital, and they recommend, as I have already stated, the soaking of the cut surface, after an operation for the cure of cancer, with strong solutions of the chloride of zinc. This chemically destroys the cancer cells, which, if suffered to remain in their original condition, inevitably give rise to a return of the disease. Carbolic acid, citric acid, and acetic acid also have a solvent power over cancer cells, which acids, in various degrees of dilution, decompose, dissolve, or destroy them. Very recently a new and novel method of using these acids has been adopted by Dr. Broadbent, of St. Mary's Hospital—(*Cancer: A New Method of Treatment*)—by injection. By means of a syringe made for the purpose, a few minims of diluted acetic acid has been injected into the substance of the cancerous mass; and in the cases detailed by Dr. B. it would seem with the effect of putting a stop to its progress. Several cases are given, and the treatment appears to have the effect of arresting the extension of the disease. In this way may be introduced solutions of the chloride of zinc, and this would certainly have a better effect than the introduction of the incisions and tents of Dr. Fell. If these acids will decompose and destroy the cancer cells on a cut surface or on an open cancerous ulcer, they must have the

Theory of the nature of cancer and treatment founded upon it further considered.

same effect when injected into the centre of a cancerous mass. The treatment, although yet merely in its infancy, affords a well grounded hope that it may effect much good. Since these lines were written, many cases have been detailed in the medical journals of the day, of the apparent cure of cancers by injection. I have myself treated cases on this plan, and I think I may say that the progress of the disease has in many cases been arrested; and in a few instances tumours apparently cancerous have entirely disappeared, after they have been injected with dilute acetic acid. We know that certain acids entirely dissolve the cancer cell out of the body; and we know again that the essence of cancer itself is in these cells, and that their multiplication and growth, constitutes the extension and growth of the disease. It is most reasonable to suppose that the injection of these acids into the centre of a cancerous tumour, should have the same effect in the body wherever or whenever the remedy can be brought into contact with the disease—where the acid can touch the cell.

Treatment
of particular
local mani-
festations of
cancer.

Having thus spoken generally of the application of caustics to cancrioid or cancerous diseases, I shall direct attention to some individual forms of disease in which caustic applications are especially indicated. I allude now more particularly to what is termed cancrioid, or epithelial cancer of the lips, face, tongue, and some parts of the skin. In cancrioid diseases of

the lip, two modes of treatment only can possibly be adopted — excision and cauterization. On this point, the partisans of excision recommend the knife to be carried well to the outside of the disease, so that the whole of it may be removed. The cut edges are generally directed then to be brought well together by means of hare-lip pins, and the wound united by the first intention. After such operations relapses are most common. The relapse is the rule, the escape from it the exception; and this, doubtless, arises from the local circumstances that I have so often had occasion to allude to. Dr. Walshe says, p. 258, "It is a matter of common belief that the lip is one of the situations in which the excision of cancer may be undertaken with the strongest hopes of success; but," continues he, "there can be no question but that the prevalent notion of this point is an exaggerated one," and goes on curiously enough to say, "that those cases which have been quoted as cases of success, were syphilitic sores, which have been cut away as cancers." Dr. W. quotes the experience of Dupuytren and Velpeau on these points as very gloomy; he believes the return almost invariably takes place in three or four months. In many cases the disease is hastened in its progress by the use of the knife. "According to our doctrine of these diseases," says M. Lebert, "the relapses are to be operated upon quickly and largely;" and he goes on to say, "We have seen a cure effected after two

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In the lip.

Use and
benefit of
arsenical
caustics.

or three operations.” Most probably after the whole of the lip has been mutilated and cut away. In all operations on the lower lip, two things at once strike us: the deformity necessarily produced by the operation, and the almost positive certainty of relapse. We may, then, reasonably inquire—Are there no means of curing or arresting the progress of disease without resorting to a remedy which is mutilating and uncertain in its effects? There is every reason to believe that caustics here find one of their most useful and legitimate applications. It is hardly to be supposed, when nearly the whole of the lower lip is one mass of induration, the upper surface of which is a ragged, cancerous ulcer, that much benefit is to be hoped from any kind of treatment; but from the knife, certainly not. Such forms of cancer, or cancriod of the lip, are clearly open to treatment by the use of caustics. I must say, that I have thus treated and cured several, if not many of such cases. What does M. Lebert say on this point? He makes use of some remarkable words: “We would wish, however,” says he, “that caustics should still be tried in the earlier stages of cancer of the lip; for,” continues he, “it cannot be concealed that, after the best performed operations with the knife, the disease will sooner or later return in the cicatrix, or in its immediate neighbourhood.” M. Lebert, in such states, gives the preference to the arsenical caustic of M. Manec, in fact, generally, M. Lebert, where he

employs caustic at all, uses or recommends this remedy. M. Manec's form consists of one part of arsenious acid to seven or eight of cinnabar, and four of burnt sponge, made into a paste with a few drops of water.

Another form of arsenical caustic has lately been recommended by Dr. Marsden, of the London Cancer Hospital. It is composed of arsenious acid and powdered acacia, of each one ounce, made into a paste, with five drachms of water. The affected part is to be painted over with it night and morning, taking care to limit the application of it to the parts affected, and not letting the caustic extend to more than one superficial inch at each time. The separation of the slough is to be hastened by a bread poultice, and when this has separated, a carrot poultice is to be applied at night, and black wash (calomel gr. 60, lime water, oj) during the day.

I completely caused the disappearance of a cancrroid of the cheek by this arsenical caustic; the cure took two months, but the part appeared quite sound, and there was no disposition to the return of the disease ten months afterwards. In this case the chloride of zinc had failed, the disease returned after its apparent cure.

"Sceptical as I was," says M. Lebert, "generally as to the curative effects of caustics in cancrroid, still I must bear witness to the great success which has been obtained by M. Manec, in the treatment of this disease by his arsenical paste." He also states that he never saw any

Dr. Marsden's
arsenical
mucilage.

Success of
arsenical
caustics.

Cancer of
the tongue.

poisonous effects follow the prudent use of this remedy. That alarming and fatal effects, however, have occasionally, but not often followed the use of caustic arsenical pastes is certain, and the only way to avoid such accidents is the application of the remedy in small quantities, and to a limited extent of surface. To cancerous diseases of the lip, however, caustic pastes are hardly applicable for any continued period of time, since it is hardly possible to prevent a portion of the paste, thus employed, from getting mixed with the saliva, and possibly swallowed. In such cases I have generally employed fluid caustics, applied daily by means of a camel-hair brush.

The next local manifestation of cancer which I shall speak of is in the tongue. It is very important that a correct diagnosis should be made before following any plan of treatment in presumed cancer of the tongue. I have seen more than one case where operations have been contemplated on this organ, for the removal of cancer, where the disease was syphilitic. One case I cannot omit mentioning. A gentleman, 64 years of age, consulted me with an indurated and enlarged tongue, covered with deep ragged ulcers, and discharging a fetid pus. It had been pronounced cancerous by several medical men. I entertained a doubt as to its nature, and inquired if the patient had contracted syphilis lately, or if he had ever had it. He stated that he had a chancre, followed by secondary symptoms—sore throat, and an

eruption on the skin, when he was over 60 years of age. After this confession, I placed him on a course of mercury. He used mercurial frictions in the axillæ, and took the mercurial vapour bath. In two months the tongue was perfectly well. This case speaks for itself. I could detail others, where an apparent cancrroid of the lip has been mistaken for an ulcer of a similar kind. A patient was sent to me at the Queen's Hospital for the removal of what was supposed to be an epithelial cancer of the lower lip, but which speedily healed under the use of mercury and the iodide of potass. These facts must teach us caution in estimating the nature of a disease, especially cancer, before any operative proceedings are determined upon.

I cannot here further consider the question of differential diagnosis between cancerous, iodic, mercurial, syphilitic, and other diseases of the tongue. I have elsewhere noticed this point. I assume, in what I have to say with regard to the effects of treatment in cancerous diseases, that the disease with which we have to do is purely of a cancerous nature. In fact, what I have to say with regard to this disease in the tongue is, as yet, rather of a negative than a positive character, it goes rather to show the inefficiency of what has been done, than to point out the positive efficacy of what may be done; nevertheless, I think that the class of remedies under consideration offer some chance of palliation, if not of positive cure.

May be confounded with other diseases.

Failure of
the ordinary
operations
in cancer of
the tongue.

Relapses.

"It has been the habit," says Dr. Walshe, "to consider the knife as positively indicated in cases of cancer of the tongue;" but he shows the fallacy of such a notion by a reference to the statements of Mr. Travers, Dr. Warren, and Mr. Cæsar Hawkins, the latter of whom says he never saw a single operation that was not followed shortly by a return of the disease. If cancer of the tongue is to be removed at all, it must be done on its very first appearance; and here the difficulty of diagnosis is so great that it is very probable a disease may be operated on which is not cancerous; in the advanced stages, the almost absolute certainty of a return of the disease in an aggravated form, and the horrible mutilation produced, should banish this operation, except in very exceptional cases, from the practice of surgery.* We know nothing positively of the effect of the application of caustics in cancerous diseases of the tongue; but, reasoning from analogy, and knowing the powerful effect some of these remedies have in modifying the surface of cancerous ulcers in other

* Left to itself, cancer of the tongue, according to M. Lebert, p. 433, terminates fatally in twelve or sixteen months. If the operation be performed, and the part apparently completely removed, relapses occur at periods varying from three to six months, according to the same authority. He graphically speaks of the operation as an illusion, which does not long deceive the patient. I never saw a single case of cancer of the tongue, or cancrroid of the lip, that did not return after an operation with the knife. A case is mentioned by Dr. Broadbent, however, in which the injection of acetic acid appeared to retard the progress of the disease, and I have fancied in my own private practice that its ravages have been stayed, and the disease rendered stationary, by the application of diluted fluid caustics, such as solution of the chloride of zinc and others.

situations, there is ground for experiment, and hope that some good may be done by these remedies, whilst, at any rate we do not aggravate the sufferings and hasten the dissolution of the patient by their application. Where caustics are employed in such situations, the mouth should be kept well open, and the tongue drawn forward with a pair of forceps. In such cases I have used with safety the fluid caustics; that of Llandolfi, or a solution of chloride of zinc, in the chlorides of bromine or antimony, or in nitric acid. I need hardly say the remedies should be applied in small quantities, and with great care.

The pain and fetor of cancerous sores may be relieved by lotions consisting of citric, acetic, and carbolic acids in various states of dilution. The latter especially appears to have a destructive action on the cancer cell, which it dissolves entirely when applied in a concentrated form. To relieve pain and correct fetor, from one to three drachms of the carbolic acid, an ounce of spirits of wine, and two pints of water, would form a lotion of about the proper strength. Of the other acids, from one to three drachms to the half-pint of water. These may be varied according to circumstances. Much valuable information on these points is contained in a paper by Dr. Barclay, in the *Association Journal* for April 11, 1866, and in the *Lancet* for March 24, of the same year.

Perhaps, however, in no form of cancrroid disease have

Use of citric, acetic, and carbolic acids in cancer.

Cancer of
the face.

Cures by
M. Manec's
arsenical
caustics.

caustic remedies been more successful than in the corroding cancrroid ulcer of the face or nose. Here, again, from obvious reasons, removal with the knife is difficult, if not, in many cases, actually impossible. M. Manec, of the Salpêtrière Hospital, Paris, treats these diseases with the arsenical paste, which I have already mentioned, and with a great amount of success. Even M. Lebert, not, in general, a great lover or advocate of caustics, speaks highly and confidently of the result of M. Manec's operations with arsenical pastes. He especially alludes to the cases of three females (pp. 661, 664), who were cured, and solidly cured, to make use of his own expression, by this method; and what is still more remarkable, all these cases were sent to M. Manec by distinguished surgeons as incurable. Well may this writer say, in reference to such cases, "We see how difficult a matter it is to give a correct judgment in such cases, and how necessary it is to free ourselves from all preconceived notions in the treatment of disease." It is exceedingly probable that the small extent of surface to which the arsenical paste of M. Manec must be applied, in cancrroid of the face, prevents any risk or fear from absorption, as I find no accident mentioned by M. Lebert as occurring in the cases which he had watched in M. Manec's practice, treated by the arsenical pastes. Nevertheless, these accidents have occurred to other surgeons,

who have adopted and followed M. Manec's practice. ("Maisonneuve," p. 60.) M. Maisonneuve mentions several cases (p. 61), where the employ of Frère Côme's paste produced vomiting, precordial anxiety, and other symptoms, which were doubtless due to the absorption of arsenic, and which were removed by the topical application of the hydrated sesquioxide of iron. In other cases, local mischief followed the use of these pastes; an inflammatory swelling of the cheeks, eyelids, and lips, succeeded a very circumscribed application of F. Côme's paste to a cancrroid ulcer of the nose.* These accidents would doubtless banish the use of arsenical pastes from the treatment of cancer, or, at any rate, render their employ a matter of extreme caution; but they are incontestably most valuable and certain remedies in the treatment of cancrroid diseases, and sometimes succeed after the failure of all other plans. The case of Pope Gregory X is quoted by M. Lebert, who was treated by M. Allertz, of Aix-la-Chapelle, who succeeded in curing the Pope of a cancer of the face, by means of Frère Côme's paste, which had resisted all anterior treatments; and so permanent was the cure that, at his death, eight years after the cicatrization of the ulcer, there had been no relapse, and the cure appeared to be quite perfect. Many cases of

Extreme caution necessary in the use of arsenical caustics.

Case of Pope Gregory the Tenth.

* Frère Côme's paste is much stronger than M. Manec's.

cure of cancerous or cancroïd growths and ulcers, by the local application of arsenic, after the failure of other escharotics, are on record; and this may probably be explained by the statement made by M. Manec, that the action of arsenic on cancerous tissues is not simply escharotic. This surgeon believes, from his observation of the action of arsenic on cancer, that it has a peculiar destructive affinity for diseases of this character. "It is a remarkable fact," says he, "that this powerful remedy, which destroys thick growths of morbid structure, when applied in the same proportions to superficial corroding ulcers, only destroys the diseased part, however thin it may be; its action does not extend to the healthy tissues." M. Manec directs that the arsenical paste, when employed in the treatment of cancer, should not be applied to a surface of greater extent than the size of a two-franc piece (about the size of the English florin) at each application; the quantity of arsenic absorbed from such a surface never produces unpleasant symptoms. M. Lebert says he never saw "serious symptoms follow the prudent application of Manec's arsenical paste." It produces, however, marked local effects, with which the generality of surgeons are little acquainted. A few hours after its first application, a moderately severe pain is felt, and the neighbouring tissues swell and become inflamed; an erysipelatous blush surrounds the part: if the application is made on the face,

the whole visage may assume a puffy appearance. These symptoms may remain for three or four days, and then gradually subside. The pain produced by the remedy may last longer, but this, I have shown, may be mitigated by the application from time to time of bladders containing ice and salt, or other remedies. The action of arsenic is not like that of other caustics, merely local; it pervades the whole system. Its presence, when applied in the form of paste to destroy a cancrroid growth, may be detected in the urine in about twelve hours after its first application, and may continue to be detected during a period of eight or ten days; and it is not till it has totally disappeared from the urine prudent to reapply the paste, supposing a second application should become necessary. Thus any cumulative injurious effect of the remedy is entirely prevented. There are several formulæ extant for the preparation of arsenical pastes; I may especially mention those bearing the names of Frère Côme and Dupuytren. The latter, consisting of two parts of arsenious acid, and 200 parts of calomel, is generally too feeble as a destructive agent.* In fact, the form of M. Manec is the safest and the best, and the only one that ought to be employed, and may be used, with the precautions to which I have alluded, with advantage and safety. In

* Dupuytren varied these proportions. The late Mr. Samuel Cooper mixed four parts of arsenious acid, and ninety-six of calomel. He employed it with complete success.—“Surgical Dictionary.” Article, *Arsenic*.

Constitutional effect
of arsenic.

speaking of the effects of arsenic, M. Valpeau makes use of these remarkable expressions: "Two of the properties attributed to it," says he, "render its use preferable to that of all other remedies, supposing that such attributes are found correct. 1st, If it could be demonstrated, as asserted by M. Manec, that its destructive action is concentrated on the abnormal or morbid tissues only, it must be the most precious of all caustics. And, 2nd, If, when mixed with the blood by absorption, as proved by its presence in the urine, it still preserved this elective action for the destruction of morbid cancerous tissues, would it not, by thus decomposing or destroying the ultimate molecules of the disease, place the patient out of the fear of future relapses?" Here, in fact, is the whole point on which the treatment of cancer hangs; it is not the extermination or destruction of the malady locally, which is so much the question, as the prevention of its reappearance. If this is ever to be done, it must and will be done by the action of chemical remedies on cancerous growths and the destruction of the cancer cell. Much has been proved in this respect, in reference to arsenic, and other remedies, for M. Lebert tells us that he carefully watched some of Manec's cases for several years with this view, but no relapse took place. I must quote another passage from M. Velpeau, and one from Sir A. Cooper, in support of this opinion. The former says, "It is not impossible that

the potential caustics may determine in the surrounding tissues an important modification, and it is equally possible that they may consequently better prevent the extension or return of the cancerous than excision. Again, as they do not so much, as cutting operations, place the life of the patient in danger, I am far from rejecting their employ.”—p. 676. One step appears to have been made already in this direction, by the discovery of the action of the chemical agents already alluded to.

In speaking of the almost always unsuccessful termination of operations for the removal of medullary or fungoid disease of the testis, Sir A. Cooper said, “It behoves medical men to direct their minds to the trial of the numerous agents which chemistry and botany have of late abundantly discovered and simplified”—(p. 196)—and, again, “if the operation be performed for this disease, the surgeon should never trust solely to the removal of the complaint with the knife, but he must endeavour to alter the constitution which has not only led to the complaint, but will surely regenerate it, if it remain unchanged.” p. 199. In the preceding pages I have drawn attention to a subject and means of cure which is now attracting very considerable attention. It is a practice, certainly, which takes time and trouble; but surely this should not be considered when life is to be lengthened and suffering diminished. That it has, in many cases, great value where all other treatment is valueless is certain. In

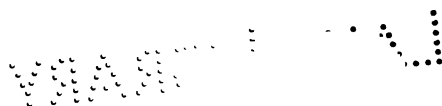
speaking of Dr. Fell's mode of practice the surgeons to the Middlesex say, "this plan of treatment is a clear advance upon the past, and may not only of itself be improved, but may lead the way to more extended blessings upon a class of the community now signally distressed." Another great advantage of this treatment is that it is altogether free from risk to life, and from liability to blood disease; it is never followed by erysipelas or pyæmia; its only drawback is pain, and this may now with certainty be mitigated, or altogether removed by the means I have mentioned; if it does not succeed it leaves the patient no worse, but rather better than before its employ.

When we reflect, for a moment, on the absolute failure of the present surgical means and appliances for giving even relief, in a great number of cases of a cancer, I do not think I shall be accused of wasting time, by drawing attention to what has been done by potential caustics in the attempts to cure or suspend the ravages of cancerous and cancrroid growths. Amongst the many caustics to which I have alluded, some are of more approved use than others, and perhaps those on which most reliance is to be placed are the chloride of zinc, arsenical pastes, and the acids; these preparations, though not actually new, are, to a certain extent, modern in their present mode of application; the chloride of zinc, as used by M. Canquoin, and the arsenical paste, as modified

by M. Manec. Perhaps one or other of these, with acid injections, will do all that remedies of this class can accomplish, and they are easily managed and applied. I must declare that I esteem very highly the class of remedies I have been considering, and I think many lives may be saved, and will be saved, by their judicious employ. I have used these remedies in many cases with a gratifying and encouraging amount of success. They can be used where the knife cannot, and in relapsed cancer they are especially serviceable.

Should my attempts to point out what has been done in this branch of surgical inquiry be the means of diminishing human suffering, or of saving or prolonging one single life, the time devoted to the composition of this essay will not have been idly spent; and I confidently hope that my labour will not have been altogether thrown away.

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